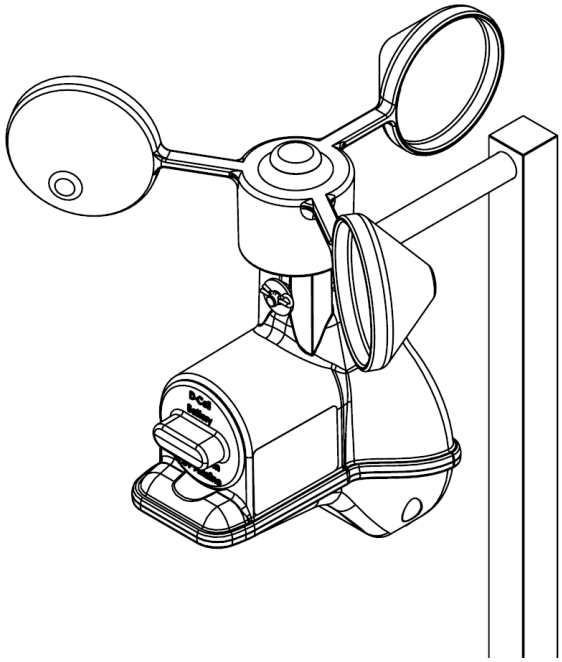
Load Systems International

WIRELESS TECHNOLOGY & CRANE INSTRUMENTATION
DIVISIONS

GS026
Radio Anemometer
Installer and user guide



WARNING! **Carefully read and understand this manual and the receiving unit User's manual before proceeding.**

IMPORTANT! **Refer to the "GS320/GS550/GS820 Display & GS Series Sensors - Installer and User's Manual" for complete information about installation, operation, maintenance, certification and warranty.**

BEFORE PROCEEDING

Read and understand the following:

For your safety and that of the people that come into contact with ***LSI*** products, understand the significance of the instructions included in this guide, respect all laws and regulations and comply with applicable standards.

Pay particular attention to text boxes and the following words:

WARNING!

Warning: this denotes an instruction that if not complied with may lead to serious injury or death.

IMPORTANT!

Important: this denotes an instruction that if not complied with may lead to product performance issues.

WARNING!

Installation must be made in compliance with *LSI* instructions and using *LSI* supplied components only. Failure to install all parts, or replacing parts or components with parts or components not supplied by *LSI*, may lead to system failure, serious injury or death.

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1. Overview

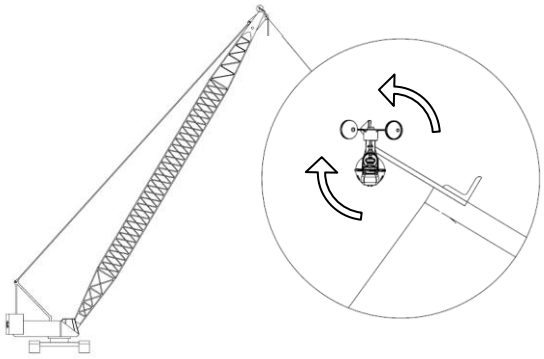
The GS026 is a battery powered radio anemometer. The wind speed is calculated from pulses of magnets inserted in the rotor. No adjustment is necessary; the anemometer never needs to be calibrated.

The expected battery life with a lithium battery is about 4 years.

Both the battery and rotor can be serviced in the field without tools.

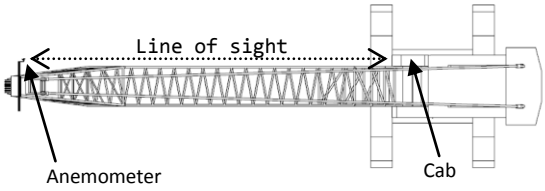
2. Location

For optimal radio communication, mount the anemometer on the same side of the boom as the receiver unit, perpendicular to the boom, and at the highest point possible.



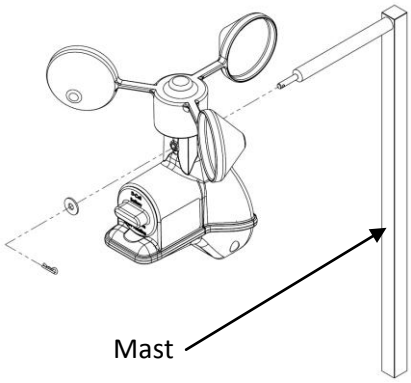
The wind speed sensor must pivot freely on the mounting mast at all boom angles.

The wind cups must be fully exposed to the wind and spin freely at all boom angles.



There should be a clear and unobstructed line of sight between the anemometer sensor and the cabin mounted display unit.

3. Installation

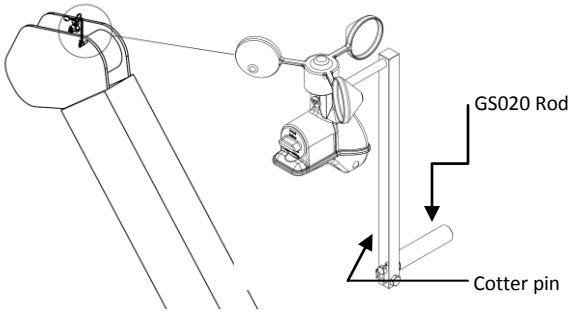


Weld or screw the mast to the boom at the selected position.

Note: Angle iron can be used to extend the reach of the mast to clear the boom tip.

IMPORTANT! **Do not weld in proximity to LSI sensor/transmitters.**

The base of the mast can be used when retrofitting the GS026 on a previously installed GS020 anemometer rod. Make sure the base of the mast is fully tightened and add the cotter pin at the rod tip.



Once the mast is secured in place the radio anemometer can be inserted on the pivot and secured in place by the washer and hairpin.

4. Operation

The radio anemometer is supplied with a battery and is ready for installation. It does not need to be calibrated or adjusted.

Refer to the GS320/GS550/GS820 manual for instructions on how to add the anemometer to the sensor list of the display.

5. Battery replacement

After a period of about 4 years of normal use, the battery may need to be replaced. To ensure the same battery life as the original battery, replace with:

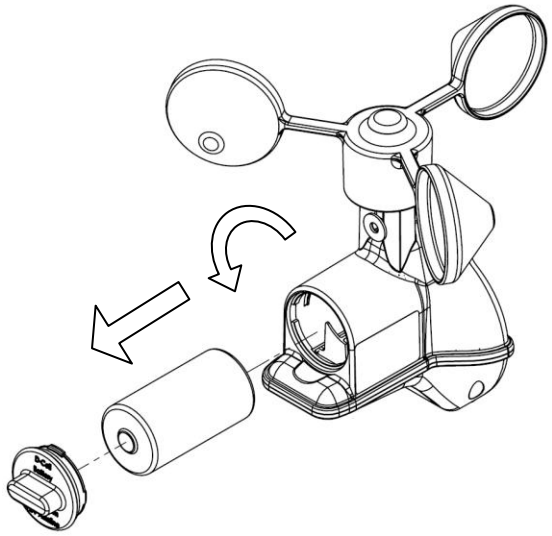
3.6V lithium D cell

Alternatively, for about 15 months of battery life, replace with:

1.5V alkaline D cell

To remove the battery compartment cover, rotate ¼ turn counterclockwise. To close the battery compartment cover turn ¼ turn clockwise.

IMPORTANT! **The positive battery contact must point to the battery compartment cover (see picture below.)**



6. Replacement parts

PD058-A: Windcup Set Replacement

PA122: Wind Speed Sensor Pivoting support Replacement

TB021: Battery Lithium “D” Size

7. FCC and IC – Instructions to the User

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radiofrequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This Class A digital apparatus complies with Canadian ICES-003

IMPORTANT!

Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC ID: QVBGS002 IC: 7076A-ICGS002

RF Exposure Warning:

This product complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment. To comply with RF exposure requirements, the unit must be installed and operated with 20 cm (8 in.) or more between the product and your body. This product may not be collocated or operated in conjunction with any other antenna or transmitter.

8. CE - Declaration of conformity

LSI
Load Systems International

LOAD SYSTEMS INTERNATIONAL INC.

Declaration of Conformity
According to EN 45014

Manufacturer's Name: Load Systems International Inc.

Manufacturer's Address:
Canada:
4495 Blvd. Wilfrid-Hamel, Suite 110
Québec, QC, Canada, G1P 2J7

Declare under our own responsibility that the products:

Load sensors: GCXXX-CE, GCXXX-ATEX-CE, GLCXXX-02, GS001-CE, GS001-ATEX-CE; GS002-CE, GS002-ATEX-CE; GS007-XX-CE; GS009-CE

Anti-Two-Block : GS005-CE, GS005-ATEX-CE; GS050-CE; GS050-ATEX-CE; GS075-CE; GS085

Angle sensors : GS010-XX-CE; GS010-XX-ATEX-CE; GS011-XX-CE, GS011-XX-ATEX-CE; GS012-CE, GS030-CE, GS030-10

Wind speed sensors : GS020-CE; GS020-ATEX-CE, GS026

Pressure sensors: PT00120-XXX; PT00130-XXX

Gateways: GS2XX-XX-CE

Displays: GS320-CE; GS375-CE; GS550-XX, GS550-CE; GS550-ATEX-CE; GS550-03-CE; GS550-XX-CE; GS820-CE; GS820-XX-CE

to which this declaration refers conform to the relevant standards or other standardising documents:

Safety: IEC 61010-1: 2nd ed. (2001), EN 61010-1: 2nd ed. (2001)
Wireless: EN 300 220-3 V1.1.1 (2000-09)
EMC: EN 301 489-3 V1.4.1 (2002-08)

CE

Québec, June 21, 2013

Éric Beaulieu
Technologies Manager

9. LSI Product Limited Warranty – IN EFFECT APRIL 1ST, 2013

LIMITED WARRANTY

LOAD SYSTEMS INTERNATIONAL INC. (hereafter "LSI") warrants its products (the "Products") will be free from defects in materials and workmanship for a period as determined by the product family as indicated below (the "Warranty Period").

Warranty Duration	Product Family
24 months	GC Series Load Cells, GD Series Line Riders, GP Series Load Pins GS001, GS002, GS003, GS004, GS005, GS007, GS010, GS011, GS012, GS020, GS030, GS031, GS035, GS050, GS075, GS101, GS106, GS110, GS112, GS220, GS221, GS222, GS224, GS550, GS820, LP Series Load Pins, LS051, LS055, PT00100
12 months	GS026, GS085, GS320, GS375

Unless otherwise specified, the default Warranty Period for the Products is 12 months after delivery of such product. Please consult LSI for any Product that is not listed in the above chart for further details.

The Warranty Period commences after delivery of such Products to the user (as evidenced on a LSI document) subject to installation and use in accordance with specifications described in the LSI Installer and User's Manual, as amended from time to time, LSI technical materials and any related writings published by LSI with respect with such Products and any applicable industry standards.

During the Warranty Period, LSI or its designated service representative shall repair, or at its option, replace any Product that is confirmed to be defective by LSI, in its sole discretion, in accordance with the Limited Warranty Services Procedures described below.

WARRANTY SERVICES PROCEDURES

In order to benefit from this Limited Warranty, the purchaser must notify LSI's customer service or LSI's authorized distributor or representative originally responsible for the sale of the Products within 10 days of the occurrence of a suspected defect in materials or workmanship, and in any case prior to the expiry of the Warranty Period. Timely notification will permit the purchaser to obtain a Return Authorization Number which will indicate return procedures and terms and conditions of such returns. A proof of purchase of the Product, such as an invoice or a receipt certifying the validity of the Warranty, must be presented in order to obtain Limited Warranty coverage. In any event, even if a Return Authorization Number is provided to purchaser, LSI reserves the right to inspect the damaged Product or part before its final decision to repair or replace the defective Product or part.

The Product or part shall be returned to LSI or its designated service representative, accompanied by the Return Authorization Number with prepaid shipping charges. The purchaser must insure the shipment or accept the risk of loss or damage during the shipment. Purchaser shall also pay any tariff or duty applicable to the return of the defective part or Product. LSI will, at its option, repair or replace the Product or part returned to LSI or to its designated service representative. LSI owns all parts or Products replaced, repaired or removed from a repaired Product. If LSI repairs a Product, the Product Warranty coverage Period is not extended and the Limited Warranty shall expire as if uninterrupted at the end of the last month of the original Warranty Period from shipping from LSI. If LSI replaces a Product, the replaced Product is warranted for the remainder of the original term or sixty consecutive (60) days, whichever is longer.

LSI reserves the right to require from the user or owner of the Products, prior to determining if the Limited Warranty coverage is applicable, that LSI receive the data logging equipment used with the Products and that LSI be authorized to retrieve all information from such data logging equipment in order to, among others, ensure that the written instructions and applicable standards, including safety margins, were respected and not exceeded during Product use. Failure by the owner or user of the Product to supply such information shall be deemed a material default of the terms and conditions of this Limited Warranty and shall be irrevocably construed as

evidence that the Product was misused or abused. Consequently LSI shall irrevocably be relieved of any obligations to compensate the user or owner of the Product for any and all damages resulting from Product failures when data logging equipment, and access to its content, cannot be freely and readily provided, unhampered, to LSI.

LSI will pay ground freight transportation costs of replacement or repaired parts or Products to the destination in the countries in which it maintains a service center (currently Canada, continental United States of America, United Kingdom, Australia and the United Arab Emirates) (the "Territory"). LSI will not pay any transportation costs of replacement or repaired parts to a destination outside of the Territory. Shipping and handling costs to locations outside the Territory shall be the responsibility of and borne by Purchaser or Owner of the Product prior to any shipment by LSI. (Contact LSI to obtain a Return Authorization Number and the address to ship parts).

EXCLUSION OF OTHER WARRANTIES

THE ABOVE WARRANTY IS THE SOLE WARRANTY APPLICABLE AND THERE ARE NO EXPRESS, LEGAL OR IMPLIED WARRANTIES OR CONDITIONS IN RELATION TO ANY PRODUCTS INCLUDING ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE AND THOSE OTHERWISE ARISING BY STATUTE OR OTHERWISE IN LAW OR FROM A COURSE OF DEALING OR USAGE OF TRADE, WHICH ARE EXPRESSLY DISCLAIMED. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY LSI OR ITS EMPLOYEES OR REPRESENTATIVES SHALL CREATE A WARRANTY OR CONDITION OR IN ANY WAY INCREASE THE SCOPE OF LSI'S OBLIGATIONS. LSI DOES NOT WARRANT THAT THE BUSINESS RESULTS OBTAINED FROM THE USE OF THE PRODUCTS WILL BE APPROPRIATE OR ADEQUATE FOR THE PURCHASER.

EXCLUSION

This Limited Warranty does not cover and shall not apply to:

- Any Product that is misused or abused, including being altered, modified or repaired not in accordance with LSI written instructions or authorizations or used not in compliance with LSI's instructions and/or industry standards and practices;
- Any incidental costs or expense, such as shipping charges to LSI or an designated service representative as well as the technician out-of-pocket expenses including traveling, lodging and meal expenses, if any;
- The damages caused during the transport or the moving of the Product;
- Damages caused by accidents, abuse, misuse, a force majeure (described as events outside a LSI's or any Product user's control, including war, riot, strikes, embargoes) or external cause;
- Any cost, damage or expenses for field labor or any other expenses related to or arising from the replacement of defective parts.
- Products used for pile-driving, wire rope activated clamshell or dragline applications. If purchaser uses the Products for pile-driving, wire rope activated clamshell or dragline application, the Limited Warranty will be deemed to have been violated for abuse.
- Any costs associated with providing LSI with data logging equipment.

LIMITATION OF LIABILITY

To the maximum extent permitted by applicable law, in no event will LSI be liable to the purchaser or any third party for any indirect, special, consequential, incidental or exemplary damages whatsoever, including but not limited to loss of revenue or profit, lost or damaged data, business interruption or any other pecuniary loss whether based on contract, tort or other causes of action, even if LSI has been advised of the possibility of such damages. In any event, the total liability of LSI arising from any cause of action or claim whatsoever, whether (1) in contract, (2) in tort (including negligence, whether sole, joint, contributory, concurrent or otherwise, but not including intentional, reckless or wanton tort), (3) under strict liability, (4) under any environmental or antipollution law or regulation, (5) connected with any toxic or hazardous substance or constituent, (6) arising out of any representation or instruction, or under any warranty, (7) or otherwise, arising out of, connected with, or resulting from the design, manufacture, sale, resale, delivery, repair, replacement or use of Products or the furnishing of any service shall in no event exceed the price allocable to and paid to LSI for the individual unit of Products or service or part thereof which gives rise to the cause of action or claim.

SOME STATES OR JURISDICTIONS DO NOT ALLOW THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

RECOMMENDED PRACTICES

LSI recommends careful consideration of the following factors when specifying and installing the Products. Before installing a Product, the Installation, Operation, and Maintenance instructions provided with the unit must be read and understood and complied with.

CHOICE OF LAW

This Limited Warranty shall be governed by and construed in accordance with:

- the laws of the Province of Quebec, Canada for products sold by LSI in Quebec;
- the laws of the Province of Ontario, Canada for products sold by LSI in Ontario and anywhere else in Canada ; and
- the laws of the State of New York for products sold by LSI anywhere in the United States of America or anywhere else, excluding Canada.

ENTIRE AGREEMENT

This document contains the entire agreement of the parties regarding the subject matter of the Product Warranty and supersedes all previous communications, representations, understandings and agreements, either oral or written, between you and LSI.

VIENNA CONVENTION EXCLUDED

The United Nations Convention on Contracts for the International Sale of Goods does not apply to this Limited Warranty.

LSI Contact Information

Technical support:

LSI Technical Support is available 24 hours a day, 7 days a week from our *Houston* and *Dubai* locations.
Please direct all technical support questions to either of these locations or contact us via email: techsupport@loadsystems.com

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